



Carmex
Precision Tools Ltd.
x-treme thread cutting™

Mini Spiral Mill-Thread



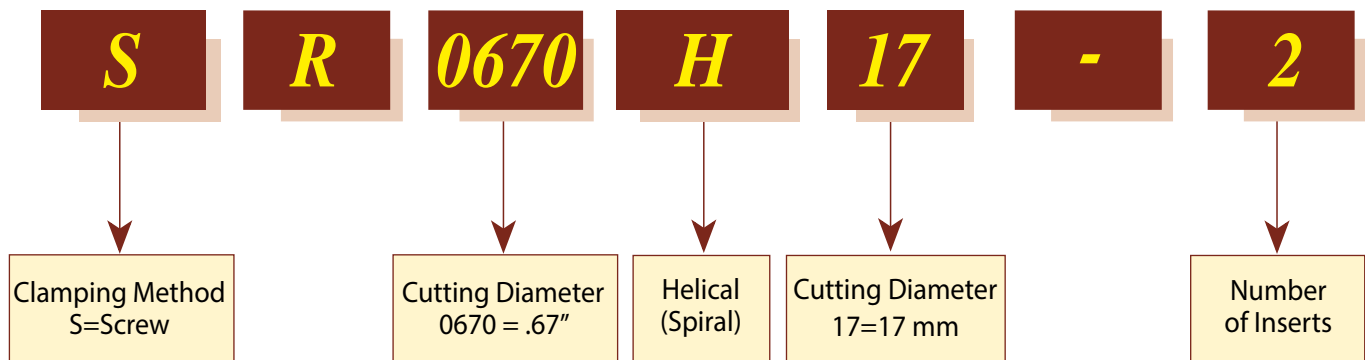
Inch 2016

Carmex presents the new members of the Spiral Mill-Thread product line.

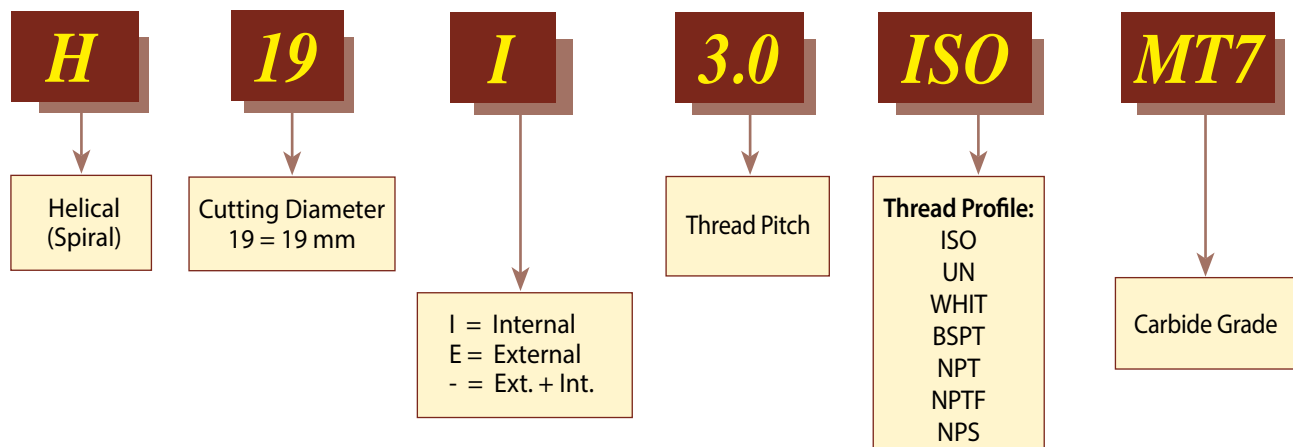
- Spiral fluted toolholders hold 1 to 3 inserts.
- Comparatively small cutting diameters.
- Toolholders with internal coolant bore.
- Smooth cutting operation at a high feed rate.
- Reduced machining time.
- Spiral design reduces vibrations and chatter.
- High grade surface finish.
- Inserts are available in MT7 Sub-Micron grade with TiAlN multi-layer coating.

Product Identification Ordering Codes

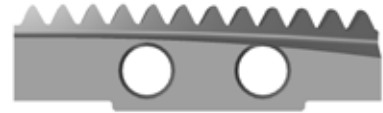
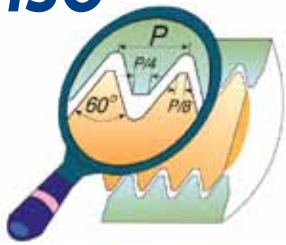
Toolholders



Inserts

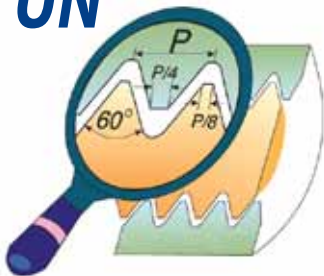


Inserts ISO



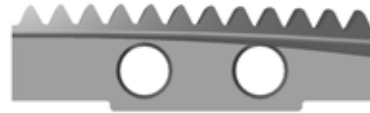
Insert Size	Pitch mm	M coarse	M fine mm	Ordering code	Toolholder
H13	1.0		≥ 15	H13 I 1.0 ISO	SR0510H13...
	1.5		≥ 16	H13 I 1.5 ISO	
	2.0	M16	≥ 17	H13 I 2.0 ISO	
H15	1.0		≥ 17	H15 I 1.0 ISO	SR0590H15...
	1.5		≥ 18	H15 I 1.5 ISO	
	2.0		≥ 19	H15 I 2.0 ISO	
	2.5	M18	≥ 20	H15 I 2.5 ISO	
H17	1.0		≥ 19	H17 I 1.0 ISO	SR0670H17...
	1.5		≥ 20	H17 I 1.5 ISO	
	2.0		≥ 21	H17 I 2.0 ISO	
	2.5	M20, M22	≥ 22	H17 I 2.5 ISO	
H19	2.0		≥ 23	H19 I 2.0 ISO	SR0750H19...
	3.0	M24	≥ 25	H19 I 3.0 ISO	

UN



Insert Size	Pitch TPI	UN	UNC	UNF	UNS	Ordering code	Toolholder
H13	16	5/8, 11/16				H13 I 16 UN	SR0510H13...
	14				5/8	H13 I 14 UN	
	12	11/16				H13 I 12 UN	
H15	16			3/4		H15 I 16 UN	SR0590H15...
	14				3/4	H15 I 14 UN	
	12	3/4, 13/16				H15 I 12 UN	
	10		3/4		7/8, 1	H15 I 10 UN	
H17	16	13/16 - 1				H17 I 16 UN	SR0670H17...
	14			7/8, 1		H17 I 14 UN	
	12	7/8				H17 I 12 UN	
	9		7/8			H17 I 9 UN	
H19	12	15/16		1		H19 I 12 UN	SR0750H19...
	8	11/16, 11/8	1			H19 I 8 UN	

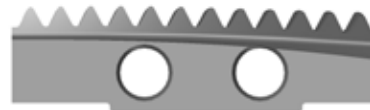
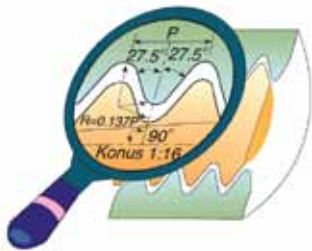
BSP (G)



Same insert for internal and external thread

Insert Size	Pitch TPI	Thread	Ordering code	Toolholder
H13	19	G 3/8	H13- 19 W	SR0510H13...
H15	14	G 1/2	H15- 14 W	SR0590H15...
H17	14	G 1/2 - 5/8	H17- 14 W	SR0670H17...
	11	G ≥ 1"	H17- 11 W	
H19	14	G 3/4 - 7/8	H19- 14 W	SR0750H19...
	11	G ≥ 1"	H19- 11 W	

BSPT

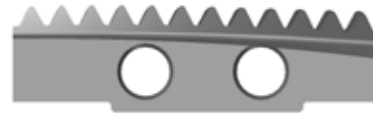
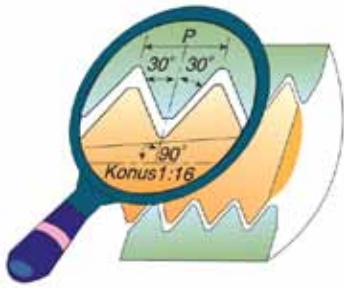


Same insert for internal and external thread

Insert Size	Pitch TPI	Thread	Ordering code	Toolholder
H13	19	3/8	H13- 19 BSPT	SR0510H13...
H15	14	1/2 - 3/4	H15- 14 BSPT	SR0590H15...
H17	14	1/2 - 3/4	H17- 14 BSPT	SR0670H17...

Mini Spiral Mill-Thread

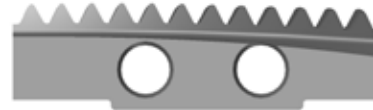
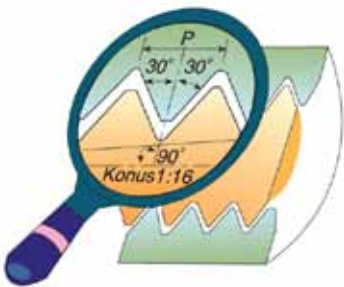
NPT



Same insert for internal and external thread

Insert Size	Pitch TPI	Thread	Ordering code	Toolholder
H13	18	$\frac{3}{8}$	H13- 18 NPT	SR0510H13...
H15	14	$\frac{1}{2} - \frac{3}{4}$	H15- 14 NPT	SR0590H15...
H17	14	$\frac{1}{2} - \frac{3}{4}$	H17- 14 NPT	SR0670H17...

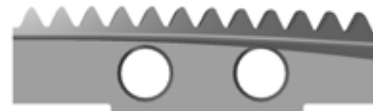
NPTF



Same insert for internal and external thread

Insert Size	Pitch TPI	Thread	Ordering code	Toolholder
H13	18	$\frac{3}{8}$	H13- 18 NPTF	SR0510H13...
H15	14	$\frac{1}{2} - \frac{3}{4}$	H15- 14 NPTF	SR0590H15...
H17	14	$\frac{1}{2} - \frac{3}{4}$	H17- 14 NPTF	SR0670H17...

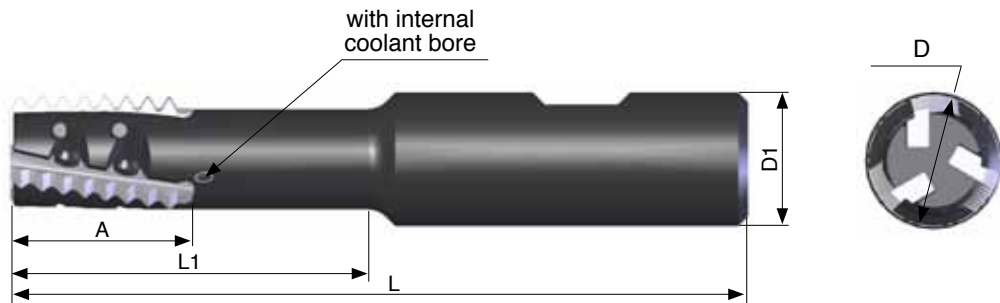
NPS



Same insert for internal and external thread

Insert Size	Pitch TPI	Thread	Ordering code	Toolholder
H13	18	$\frac{3}{8}$	H13- 18 NPS	SR0510H13...
H15	14	$\frac{1}{2} - \frac{3}{4}$	H15- 14 NPS	SR0590H15...
H17	14	$\frac{1}{2} - \frac{3}{4}$	H17- 14 NPS	SR0670H17...

Toolholders



Ordering Code	Insert Type	Insert size A	D	D1	L	L1	No. of Inserts	Screw	Key
SR0510H13-1	H13	1.06	.51	.75	1.38	3.54	1	S13	K16
SR0590H15-1	H15	1.06	.59	.75	1.57	3.74	1	S15	K16
* SR0670H17-2	H17	1.06	.67	.75	1.18	3.35	2	S17	K16
* SR0670H17J-2	H17	1.06	.67	.75	1.77	3.94	2	S17	K16
SR0750H19-3	H19	1.06	.75	.75	1.18	3.35	3	S19	K16
SR0750H19J-3	H19	1.06	.75	.75	2.16	4.33	3	S19	K16

* When using NPT, NPTF, BSPT inserts the cutting diameter D = .71"

Spiral Mill-Thread Inserts Speed and Feed Selection

MT7 Sub-Micron Grade with Titanium Aluminum Nitride multi-layer coating (ISO K10 - K20). This is a general purpose grade, which can be used with all materials; it should be run at medium to high cutting speeds.

ISO Standard	Materials	Condition Description	Cutting Speed ft/min
			MT7
P	Non-Alloy Steel and Cast Steel, Free Cutting Steel	Annealed < 0.25% C	490-820
		Annealed ≥ 0.25% C	360-750
		Annealed ≥ 0.55% C	330-650
		Quenched & Tempered < 0.55% C	260-520
		Quenched & Tempered ≥ 0.55% C	200-260
	Low Alloy Steel and Cast Steel (less than 5% alloying elements)	Annealed	330-520
		Quenched & Tempered	300-460
	High Alloy Steel, Cast Steel, Tool Steel	Annealed	200-330
Quenched & Tempered		160-300	
M	Stainless Steel and Cast Steel	Ferritic	400-720
		Martensitic	330-650
		Austenitic	260-460
K	Cast Iron Nodular (GGG)	Ferritic	330-460
		Pearlitic	330-400
	Grey Cast Iron (GG)	Ferritic	400-520
		Pearlitic	300-460
	Malleable Cast Iron	Ferritic	400-460
		Pearlitic	300-430
N	Aluminum - Wrought Alloy	Not Cureable	500-1150
		Cured	400-980
	Aluminum - Cast , Alloyed	Not Cureable ≤ 12% Si	330-980
		Cured	330-820
		High Temperature > 12% Si	330-650
	Copper Alloys	Free Cutting > 1% Pb	260-820
		Brass	260-650
		Electrolytic Copper	260-980
	Non Metallic	Duroplastics, fiber Plastics	260-980
		Hard Rubber	260-650
S	High Temperature / Super Alloys (Fe based)	Annealed	65 - 130
		Cured	65 - 100
	High Temperature / Super Alloys (Ni or Co based)	Annealed	65 - 115
		Cured	65 - 100
		Cast	65 - 115
	Titanium Alloys	Alpha + Beta Alloys Cured	100-130

Recommended FEED RATE: .002 - .006

As you may note, cutting speed is shown in range terms. In most standard cases, choosing a speed in the middle of the range would be a good choice for a start. For hard metals reduce cutting speed.



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CARMEX MINI SPIRAL INCH 12/2015

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